CLAIMS

1. A pair of probes for analyzing protein-protein interactions, which comprises:

a probe A containing at least an N-terminal half polypeptide of split *Renilla* luciferase; and

a probe B containing at least the remaining C-terminal half polypeptide of split *Renilla* luciferase.

2. The pair of probes for analyzing protein-protein interactions of claim 1, wherein the probe A contains an N-terminal half polypeptide of an intein and N-split *Renilla* luciferase, and the probe B contains a C-terminal half polypeptide of the intein and C-split *Renilla* luciferase.

3. The pair of probes for analyzing protein-protein interactions of claim 1 or 2, wherein a linker sequence is linked to each of the N-terminal half polypeptide of split *Renilla* luciferase and the remaining C-terminal half polypeptide of split *Renilla* luciferase.

4. The pair of probes for analyzing protein-protein interactions of claim 3, wherein the linker sequence consists of 3 to 20 amino acid residues.

5. The pair of probes for analyzing protein-protein interactions of any one of claims 1 to 4, wherein the N-terminal half polypeptide of split *Renilla* luciferase and the remaining C-terminal half polypeptide of split *Renilla* luciferase are obtained by splitting *Renilla* luciferase between Ser91 and Tyr92.

6. A method for analyzing protein-protein interactions, which

comprises

fusing a protein "a" to the probe A of any one of claims 1 to 5, and fusing a protein "b" to the probe B of any one of claims 1 to 5;

making the protein "a" fused to the probe A and the protein "b" fused to the probe B coexist in the presence of coelenterazine and oxygen; and

measuring luminescence thus emitted.

7. The method for analyzing protein-protein interactions according to claim 6, which comprises introducing a polynucleotide expressing the protein "a" fused to the probe A and a polynucleotide expressing the protein "b" fused to the probe B into cells, thereby making the protein "a" fused to the probe A and the protein "b" fused to the probe B coexist in the presence of coelenterazine and oxygen.

8. The method for analyzing protein-protein interactions according to claim 6, which comprises introducing a polynucleotide expressing the protein "a" fused to the probe A and a polynucleotide expressing the protein "b" fused to the probe B into a non-human totipotent cell, and causing ontogenesis of the cell to non-human animal, thereby making the protein "a" fused to the probe A and the protein "b" fused to the probe B coexist in the presence of coelenterazine and oxygen in any one of the cells of the animal or offspring animal thereof.

9. A non-human animal or offspring animal thereof, which is obtained by

introducing a polynucleotide expressing the protein "a" fused to the probe A and a polynucleotide expressing the protein "b" fused to the probe B into a non-human totipotent cell; and

causing ontogenesis of the cell to non-human animal.

10. A method for screening a substance, which comprises:

introducing a test sample into the non-human animal or offspring animal thereof of claim 9; and

analyzing a protein-protein interaction in the cell of the non-human animal or offspring animal thereof.